



CAMPYLOBACTERIOSIS FACT SHEET

Overview

Campylobacteriosis is an infectious, intestinal disease caused by the bacteria *Campylobacter*. It is one of the most common causes of diarrheal illness in the United States. The *Campylobacter* organisms responsible for human infection are spiral, curved shaped bacteria and predominantly of the species *Campylobacter jejuni* (*C. jejuni*) or *Campylobacter coli* (*C. coli*).

Signs and Symptoms

Symptoms associated with *Campylobacter* infection include mild to severe diarrhea, fever, abdominal pain, and abdominal cramping. The diarrhea associated with *Campylobacter* infection may be bloody and can be accompanied by nausea and vomiting. The onset of illness most often begins two to five days after exposure to the organism, with a range of one to 10 days. While some people infected with *Campylobacter* do not develop symptoms, for others the illness will have an approximate one week duration. Though rare, *Campylobacter* can spread to the bloodstream and cause life threatening infection for those persons with compromised immune systems.

Causes and Transmission

Most people develop campylobacteriosis as a result of consuming raw or undercooked poultry meat or from eating other foods that are contaminated by these items. There are many chicken flocks infected with *Campylobacter*; however, the birds show no sign of infection. Birds can spread the bacteria through sharing common water sources or through their contact with infected fecal matter in environments they share. When poultry is prepared as a food source through slaughter of the birds, the *Campylobacter* organisms can be transferred from the intestines to the meat.

Unpasteurized milk is another source from which people can become infected with *Campylobacter*. If a cow has an infected udder, or if manure comes in contact with milk that is unpasteurized, the milk can become contaminated. Some surface water sources and streams may become contaminated from the feces of infected cows and birds.

The organism is not usually spread from one person to another, but this can happen if the infected person is producing a large volume of diarrhea or has

poor hygiene. People infected with *C. jejuni* have the ability to pass the bacteria in their feces for several days to a week or more. People who are untreated can pass *C. jejuni* in their stool for two weeks or longer; however, humans rarely become chronic carriers. Individuals who work in food preparation, health care workers, and children in day care should be excluded from these high-risk settings while symptomatic with diarrhea. Most infected people may return to work or school when their stools become formed, provided that they carefully wash their hands after toilet visits. Antibiotic treatment may reduce the shedding of infectious organisms, thereby minimizing person to person transmission. 2

Risk Factors

Campylobacteriosis can occur in people of all ages, though it is most common in young children. Immune suppressed persons are more likely become infected with *Campylobacter* and suffer the most complicated course of illness. Though infrequent, outbreaks of *Campylobacter* can occur and have frequently been associated with unpasteurized dairy products, contaminated water, poultry, and produce.

Complications

Most people will recover from *Campylobacter* infection within two to five days, although some may be ill as long as 10 days. In persons with compromised immune systems, *Campylobacter* infection occasionally spreads to the bloodstream and causes a serious life-threatening infection or long term consequences. Some may develop arthritis. Though rare, *Campylobacter* infection can lead to complications such as Guillain-Barré Syndrome, a serious neurological condition. It is estimated that about one in every 1,000 reported *Campylobacter* illnesses leads to Guillain-Barré Syndrome.

Diagnosis

Stool or (rarely) blood cultures are usually used for diagnosis. Polymerase chain reaction (PCR)-based techniques for rapid detection or culture confirmation are also available. Serology is currently used only in research.

Treatments

Most people infected with *Campylobacter* bacteria will recover without treatment. Some may need to drink extra fluids while experiencing diarrhea, so they do not become dehydrated. Antibiotics are occasionally used to treat severe cases or to shorten the duration of communicability. Since relapses occasionally occur, some physicians might treat mild cases with antibiotics to prevent a recurrence of symptoms.

Prevention

Some simple food handling practices can help prevent Campylobacter infections:

- Avoid eating raw or undercooked meats. Always treat raw poultry, beef and pork as if they are contaminated and cook all products thoroughly. Make sure that the meat is cooked throughout (no longer pink) and any juices run clear. All poultry should be cooked to reach a minimum internal temperature of 165°F. If you are served undercooked poultry in a restaurant, send it back for further cooking.
 - Ensure that the correct internal cooking temperature is reached – particularly when using a microwave, which may heat food unevenly.
 - Wrap fresh meats in plastic bags at the market to prevent blood from dripping on other foods.
 - Refrigerate foods promptly; minimize holding foods at room temperature.
 - Avoid eating raw eggs or undercooking foods containing raw eggs.
 - Prevent cross-contamination in the kitchen by using separate cutting boards for foods of animal origin and other foods and by thoroughly cleaning all cutting boards, countertops, and utensils with soap and hot water after preparing raw food of animal origin.
 - Wash hands with soap before preparing food.
 - Wash hands with soap after handling raw foods of animal origin and before touching anything else.
 - Do not drink unpasteurized milk (raw milk) or untreated surface water.
 - Make sure that persons with diarrhea, especially children, wash their hands carefully and frequently with soap to reduce the risk of spreading the infection.
- Wash hands with soap after contact with pet feces.

Disease Patterns

Campylobacteriosis is identified much more often in infants and young adults than any other age group. Campylobacter infections occur more frequently in warm, summer months than in wintertime, and more often in males than females. Each year, between 1200-2400 cases of campylobacteriosis are reported to the Pennsylvania Department of Health. The number of cases for 2015 increased because of a change in the epidemiologic criteria used for reporting this condition.

Additional Information

Centers for Disease Control and Prevention:

<http://www.cdc.gov/foodsafety/diseases/campylobacter/index.html>

This fact sheet provides general information. Please contact your physician for specific clinical information.

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